



Australian Bureau of Statistics

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Education News - May, 2013

This newsletter highlights the latest curriculum related teaching resources, student activities and statistical tools that have been developed by ABS Education Services as well as other ABS resources that are useful for schools.

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A word from the editor

W elcome to the Term 2 edition of Ed News!

In the spirit of UN World Environment Day on 5 June, the theme for this edition is **Environment and Sustainability**.

In this edition, we explore the theme of sustainability through the **Household Energy Use and Costs** article from the Australian Social Trends, Sep 2012 publication. I thought this article might be a great way for teachers to start a conversation with their students about their opinions on environmental issues and energy conservation. In fact, in **CensusAtSchool News**, you will find 2012 CensusAtSchool data on this very topic.

Continuing our environmental theme, I thought this would be a great opportunity to give you some ideas for how you can incorporate this topic into your students' learning. In **'An Idea for the Classroom,'** we are profiling **CaSMa 11 Environmental Graphs**. I have also found some resources that I hope will encourage students to start thinking about the relationship between maths and the environment. To find out more, check out the **'Resources for Teachers'** section.

The ISLP Poster Competition is now closed and the winners of the national competition have been notified. I would like to take this opportunity to thank all the teachers that encouraged their students to participate. More information about the winning poster can be found in the **'ISLP Poster Competition Update'** section of this newsletter.

For additional ABS data, statistics and resources, check out our **'Interesting Publications'** section. These publications offer a gateway into a range of recently published ABS products that I have found particularly interesting this month.

I hope you enjoy our May edition of Ed News. If you have any suggestions for articles or activities that you would like covered in the next edition of Ed News, please don't hesitate to contact Education Services on 1800 623 273.



Fran Mawdsley joined the ABS in 2007, initially working as a statistical trainer and then as a subject matter expert in social and demographic collections. Fran joined Education Services in January 2012 as the Assistant Director. This position combines two of Fran's interests: education and the skill involved in understanding and using data to tell stories. Previous to her ABS career, Fran was a secondary school teacher in Victoria, where she provided leadership in English and Psychology curricula.

1. CensusAtSchool News



Questionnaire closes 19 July! We have now officially passed the half way point of the 2013 CensusAtSchool Questionnaire cycle. I encourage all teachers, whose students haven't yet completed the questionnaire, to do so soon to ensure your students don't miss out.

What do Australian students think about environmental issues? Australian students have consistently demonstrated their awareness of environmental issues in the CensusAtSchool Questionnaire. Some interesting statistics from the 2012 questionnaire include:

- NSW students were the highest switch flickers when it came to conserving power with nearly 54 per cent turning off appliances at the power point. The lowest student group was ACT with only 43 per cent turning off power points.
- Students recycle almost as much as they save water when brushing their teeth. In all states and territories, these two actions were the most popular taken to conserve the environment at home.
- Installing a water tank varied depending on students' state or territory. NT was the lowest at nearly 20 per cent, whilst SA was the highest with 59 per cent for having a water tank installed.

These statistics are sourced from our 2012 Interesting Statistics. Our Interesting Statistics are a great entry point to CensusAtSchool data, providing a quick and easy analysis summary. Interesting statistics for previous CensusAtSchool questionnaires can also be found on our website.

Complete CensusAtSchool environmental data can be found in the Summary Tables and National Time Series Tables. The tables show data results at the State/Territory level as well as Australia as a whole. Alternatively, if you'd like your students to be more hands on and find their own data, why not try the Random Sampler? The Sampler is a fantastic tool that makes it easy for students to collect data samples according to their own chosen search parameters.

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2. Australian Social Trends: Household Energy Use and Costs, Sep 2012

The environment, climate change, pricing carbon, and even the cost of electricity, have become topics of everyday conversation and importance for Australians in recent years.

In the CensusAtSchool Questionnaire students are asked what actions they take in their home to conserve the environment, and how they rate the importance of environmental issues. In 2012, 51 per cent of Australian students conserved power by switching off appliances at the power point. Reducing energy usage was consistently important to students across all States and Territories, with the ACT revealing the highest median level in the data.

So now that we know that students are interested in the environment, why not help them explore this issue further? The Household energy use and costs article from the Australian Social Trends (cat. no. 4102.0)

publication offers an interesting insight into the way Australians are implementing energy saving practices, as well as other information such as current household energy use and costs.

How to find the article:

Image 1 - Using the Google Search Bar type 'Household energy use and costs' and click on the search button.



Image 2 - The article will appear as the first search result. Click the title to access the publication.

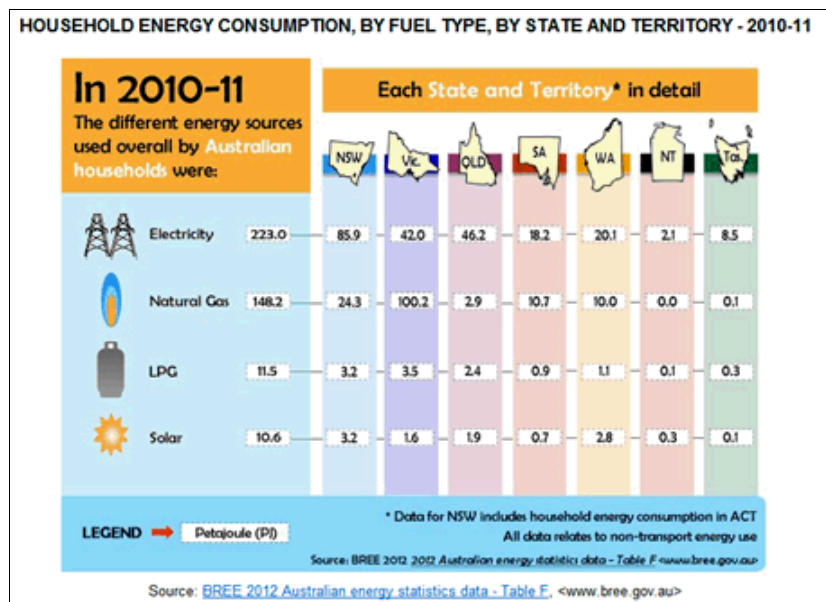


Image 3 - On the page you are directed to, you will be able to read the article in full.



Teacher Consultant: Ideas for the Classroom

- Ask your students to imagine that their family is looking to move house. Using the social trends information in the article, get students to make a decision about what type of house and appliances would be the most energy efficient. Ensure they include data to justify their decisions.
- Ask your students to identify the different ways data are shown in the article e.g. infographics, column graph. Which style do they judge to be the most effective display of data, and why?
- Download and listen to the podcast - ask students why they think the ABS has chosen to present data through a podcast.



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3. An Idea for the Classroom: CaSma 11 Environmental Graphs

In this edition of Ed News, we are profiling one of our lessons, CaSma 11 Environmental Graphs.

In this lesson, students are introduced to the concept of deviation from the mean. Students use CensusAtSchool summary data from each state to compare environmental issues. Students then take the mean environmental issue from each state and territory to calculate how issues in each deviate from the mean. This activity will encourage students to broaden their data awareness and ability to analyse, interpret and evaluate statistical information.

Do you have a classroom idea that uses ABS data or ABS Education products? I encourage teachers to contact us at education@abs.gov.au so we can share your idea with schools around Australia.

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4. Resources For Teachers

Education Services Datasets! Education Services' datasets have been updated. Accessible via our home page, the new datasets are organised into four categories: Economy, Society and Community, Population and Environment and Energy.

Education Services has also used this opportunity to improve resource accessibility for teachers. Datasets can now be either viewed directly on our web pages on a single, easy to navigate page, or downloaded as a single Excel file. Some datasets are linked to lessons or interactive graphs to enhance your students' learning, and Australian Curriculum codes are coming soon. These are just some of the things we are doing to make our resources as teacher friendly as possible.



Mathematics of Planet Earth! This exciting program is being run by the Australian Maths and Science Institute (AMSI) to spread the word about the role of maths and statistics in understanding the challenges of our world.

This program is a great opportunity for teachers to show their students the importance of Maths in understanding our planet. There are a number of Classroom Resources available that use real world examples for your students to sink their teeth into, such as pollution levels in Beijing. The website also hosts Classroom Activities from the Australian Bureau of Statistics, Geoscience Australia and NASA, so planning lessons for your students will be a breeze.

Science Week **(August 11-18) is still a little while away, but that doesn't mean you can't register your students for an exciting activity now!** Over two thousand years ago a man called Eratosthenes calculated the circumference of the earth. Now, two thousand years later, students across Australia will do the same in an experiment called 'Shadows of Eratosthenes.'

The experiment aims to measure the circumference of the earth using a pole, a spirit level, the sun and some trigonometry just like Eratosthenes did. To participate in the experiment, teachers will need to register their students. Schools from all around Australia will then be paired up to conduct the experiment during Science Week. This is an exciting opportunity for students to conduct a real experiment using Maths with their peers across Australia.

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5. ISLP Poster Competition Update



The ISLP poster competition is now closed and the winner has been chosen! The successful poster from the junior division is going on to the international phase of the competition. Unfortunately no entries were received for the senior division.

And the winners are.... Isha Singh (Karratha SHS), Chani Guldenhuys (John Curtin College of the Arts) and Tim Cusens (Jurien DHS)!

The students submitted a poster titled 'Project Sunflower: How climate, water and fertilizer affects sunflower growth in Western Australia.' Students investigated how different variables affected sunflower growth.

The poster submitted by these students is even more impressive when you consider that they all attend separate schools and are separated by over 1,600 kilometres.

Congratulations once again to Isha, Chani and Tim for creating such a fantastic statistical poster.

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6. Conferences

Upcoming conferences:

ESU will be presenting at the AAMT Biennial Conference 2013 this year. Our specialist teacher consultant Vivienne McQuade will be presenting a workshop about the importance of teaching statistics and the Australian Curriculum. The workshop will profile ABS resources. The conference is being held at the University of Melbourne on 10-13 July 2013.

Keep an eye out for Education Services attending conferences in the second half of 2013. You can keep up to date between newsletters by visiting the Education Services home page.

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7. Interesting Publications

Community Engagement with Nature Conservation, Australia, 2011-12 (cat. no. 4602.0.00.002)

This publication is new and explores the views and practices of Australians on nature conservation issues. Topics explored include participation in natural environment related activities, participation in nature conservation, advocacy for nature conservation and potential for increased engagement in nature conservation. A data cube is available to download.

Year Book Australia, 2012 (cat. no. 1301.0)

Each year the ABS publishes a Year Book. In the 2012 Year Book you will find articles relating to the topic of environment, such as, household water use, energy use, waste management and land and biodiversity.

Australia's Environment: Issues and Trends, Jan 2010 (cat. no. 4613.0)

This publication looks at trends in Australia's environment with data on topics of climate change, population, human activities, atmosphere, water and landscape. This publication is available to download as a PDF document.

Remember: all ABS publications are **free** to download from the ABS website.

You can view the full range of previously released publications from the ABS on the Statistics by Release Date web page.

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8. Contact Details

How to contact **ABS Education Services**

Free Call: 1800 623 273

Email: education@abs.gov.au

Mail: GPO Box 2796

Melbourne, 3001

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Education News is a totally free resource that aims to assist teachers' use of ABS data in their classroom. When you subscribe you will be notified of each new edition as it is published.

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